



"THERE WAS NO SIGN OF LIFE ABOARD; HER SPARS WERE GONE, WITH THE EXCEPTION OF THE FOREMAST, BROKEN AT THE MOUNDS."

THE DERELICT "NEPTUNE."

BY MORGAN ROBERTSON.

ACROSS the Atlantic Ocean from the Gulf of Guinea to Cape St. Roque moves a great body of water—the Main Equatorial Current—which can be considered the motive power, or mainspring, of the whole Atlantic current system, as it obtains its motion directly from the ever-acting push of the trade-winds. At Cape St. Roque this broad current splits into two parts, one turning north, the other south. The northern part contracts, increases its speed, and, passing up the northern coast of South America as the Guiana Current, enters through the Caribbean Sea into the Gulf of Mexico, where it circles around to the northward; then, colored a deep blue from the fine river silt of the Mississippi, and heated from its long surface exposure under a tropical sun to an average temperature of eighty degrees, it emerges into the Florida Channel as the Gulf Stream.

From here it travels northeast, following the trend of the coast line, until, off Cape Hatteras, it splits into three divisions, one of which, the westernmost, keeps on to lose its warmth and life in Baffin's Bay. Another impinges on the

Hebrides, and is no more recognizable as a current; and the third, the eastern and largest part of the divided stream, makes a wide sweep to the east and south, enclosing the Azores and the dead-water called the Sargasso Sea, then, as the African Current, runs down the coast until, just below the Canary Isles, it merges into the Lesser Equatorial Current, which, parallel to the parent stream, and separated from it by a narrow band of back-water, travels west and filters through the West Indies, making puzzling combinations with the tides, and finally bearing so heavily on the young Gulf Stream as to give to it the sharp turn to the northward through the Florida Channel.

In the South Atlantic, the portion of the Main Equatorial Current split off by Cape St. Roque and directed south leaves the coast at Cape Frio, and at the latitude of the River Plate assumes a due easterly direction, and crosses the ocean as the Southern Connecting Current. At the Cape of Good Hope it meets the cold, northeasterly Cape Horn Current, and with it passes up the coast of Africa to join the Equatorial Current at the starting-point in

the Gulf of Guinea, the whole constituting a circulatory system of ocean rivers, of speed value varying from eighteen to ninety miles a day.

On a bright morning in November, 1894, a curious-looking craft floated into the branch current which, skirting Cuba, flows westward through the Bahama Channel. A man standing on the highest of two points enclosing a small bay near Cape Maisi, after a critical examination through a telescope, disappeared from the rocks, and in a few moments a light boat, of the model used by whalers, emerged from the mouth of the bay, containing this man and another. In the boat besides was a coil of rope.

The one who had inspected the craft from the rocks was a tall young fellow, dressed in flannel shirt and trousers, the latter held in place by a cartridge-belt, such as is used by the American cowboy. To this was hung a heavy revolver. On his head was a broad-brimmed cork helmet, much soiled, and resembling in shape the Mexican sombrero. Beneath this headgear was a mass of brown hair, which showed a non-acquaintance with barbers for, perhaps, months, and under this hair a sun-tanned face, lighted by serious gray eyes. The most noticeable feature of this face was the extreme arching of the eyebrows—a never-failing index of the highest form of moral courage. It was a face that would please. The face of the other was equally pleasing in its way. It was red, round, and jolly, with twinkling eyes, the whole borrowing a certain dignity from closely-cut white hair and moustaches. The man was about fifty, dressed and armed like the other.

"What do you want of pistols, Boston?" he said to the younger man. "One might think this an old-fashioned, piratical cutting out."

"Oh, I don't know, Doc. It's best to have them. That hulk may be full of Spaniards, and the whole thing nothing but a trick to draw us out. But she looks like a derelict. I don't see how she got into this channel, unless she drifted up past Cape Maisi from the southward, having come in with the Guiana Current. It's all rocks and shoals to the eastward."

The boat, under the impulse of their oars, soon passed the fringing reef and came in sight of the strange craft, which lay about a mile east and half a mile off shore. "You see," resumed the younger man, called Boston, "there's a back-water inside Point Mulas, and if she gets into it she may come ashore right here."

"Where we can loot her. Nice business for a respectable practitioner like me to be engaged in! Doctor Bryce, of Havana, consorting with Fenians from Canada, exiled German socialists, Cuban horse thieves who would be hung in a week if they went to Texas, and a long-legged sailor man who calls himself a retired naval officer, but who looks like a pirate; and all shouting for *Cuba Libre. Cuba Libre!* It's plunder you want."

"But none of us ever manufactured dynamite," answered Boston, with a grin. "How long did they have you in Moro Castle, Doc?"

"Eight months," snapped the doctor, his face clouding. "Eight months in that rat-hole, with the loss of my property and practice—all for devotion to science. I was on the brink of the most important and beneficent discovery in explosives the world ever dreamt of. Yes, sir, 'twould have made me famous and stopped all warfare."

"The captain told me this morning that he'd heard from Marti," said Boston, after an interval. "Good news, he said, but that's all I learned. May be it's from Gomez. If he'll only take hold again we can chase the Spanish off the island now. Then we'll put some of your stuff under Moro and lift it off the earth."

In a short time, details of the craft ahead, hitherto hidden by distance, began to show. There was no sign of life aboard; her spars were gone, with the exception of the foremast, broken at the hounds, and she seemed to be of about a thousand tons burden; colored a mixed brown and dingy gray, which, as they drew near, was shown as the action of iron rust on black and lead-colored paint. Here and there were outlines of painted ports. Under the stump of a shattered bowsprit projected from between bluff bows a weather-worn figure-head, representing the god of the sea. Above on the bows were wooden-stocked anchors stowed inboard, and aft on the quarters were iron davits with blocks intact—but no falls. In a few of the dead-eyes in the channels could be seen frayed rope-yarns, rotten with age, and, with the stump of the foremast, the wooden stocks of the anchors, and the teak-wood rail, of a bleached gray color. On the round stern, as they pulled under it, they spelled, in raised letters, flecked here and there with discolored gilt, the name "Neptune, of London." Unkempt and forsaken, she had come in from the mysterious sea to tell her story.

They climbed the channels, fastened the painter, and peered over the rail. There was no one in sight, and they sprang down, finding themselves on a deck that was soft and spongy with time and weather.

"She's an old tub," said Boston, scanning the gray fabric fore and aft; "one of the first iron ships built, I should think. They housed the crew under the t'gallant forecabin. See the doors forward, there? And she has a full-decked cabin—that's old style. Hatches are all battened down, but I doubt if this tarpaulin holds water." He stepped on the main hatch, brought his weight on the ball of one foot, and turned around. The canvas crumbled to threads, showing the wood beneath. "Let's go below. If there were any Spaniards here they'd have shown themselves before this." The cabin doors were latched but not locked, and they opened them.

"Hold on," said the doctor; "this cabin may have been closed for years, and generated poisonous gases. Open that upper door, Boston."

Boston ran up the shaky poop ladder and opened the companion-way above, which let a stream of the fresh morning air and sunshine into the cabin; then, after a moment or two, descended and joined the other, who entered from the main deck. They were in an ordinary ship's cabin, surrounded by staterooms, and with the usual swinging lamp and tray; but the table, chairs, and floor were covered with fine dust.

"Where the deuce do you get so much dust at sea?" coughed the doctor.

"Nobody knows, Doc. Let's hunt for the manifest and the articles. This must have been the skipper's room." They entered the largest stateroom, and Boston opened an old-fashioned desk. Among the discolored documents it contained, he took out one and handed it to the doctor. "Articles," he said; "look at it." Soon he took out another. "I've got it. Now we'll find what she has in her hold, and if it's worth bothering about."

"Great Scott!" exclaimed the doctor; "this paper is dated 1844, fifty years ago." Boston looked over his shoulder.

"That's so; she signed her crew at Boston, too. Where has she been all this time? Let's see this one."

The manifest was short, and stated that her cargo was 3,000 barrels of lime, 8,000 kids of tallow, and 2,500 carboys of acid, 1,700 of which were sulphuric, the rest of nitric acid. "That cargo won't be much

good to us, Doc. I'd hoped to find something we could use. Let's find the log-book, and see what happened to her." Boston rummaged what seemed to be the first mate's room. "Plenty of duds here," he said; "but they're ready to fall to pieces. Here's the log."

He returned with the book, and, seated at the dusty table, they turned the yellow leaves. "First departure, Highland Light, March 10th, 1844," read Boston. "We'll look in the remarks column."

Nothing but the ordinary incidents of a voyage were found until they reached the date June 1st, when entry was made of the ship being "caught aback" and dismasted off the Cape of Good Hope in a sudden gale. Then followed daily "remarks" of the southeasterly drift of the ship, the extreme cold (which, with the continuance of the bad weather, prevented them from saving the wreck for jury-masts), and the fact that no sails were sighted.

June 6th told of her being locked in soft, slushy ice, and still being pressed southward by the never-ending gale; June 10th said that the ice was hard, and on June 15th was the terrible entry: "Fire in the hold."

On June 16th was entered this: "Kept hatches battened down and stopped all air-holes, but the deck is too hot to stand on, and getting hotter. Crew insist on lowering the boats and pulling them northward over the ice to open water in hopes of being picked up. Good-by." In the position columns of this date the latitude was given as 62-44 S. and the longitude as 30-50 E. There were no more entries.

"What tragedy does this tell of?" said the doctor. "They left this ship in the ice fifty years ago. Who can tell if they were saved?"

"Who indeed?" said Boston. "The mate hadn't much hope. He said 'Good-by.' But one thing is certain: we are the first to board her since. I take it she stayed down there in the ice until she drifted around the Pole, and thawed out where she could catch the Cape Horn Current, which took her up to the Hope. Then she came up with the South African Current till she got into the Equatorial drift; then west, and up with the Guiana Current into the Caribbean Sea to the southward of us, and this morning the flood tide brought her through. It isn't a question of winds; they're too variable. It's currents, though it may have taken her years to get here. But the surprising part of it is that she hasn't been boarded. Let's look in the hold and see what the fire has done."



"SOON THE SQUALL, COMING WITH A SHOCK LIKE A SOLID BLOW, STRUCK THE HULK BROADSIDE TO AND CAREENED HER."

When they boarded the hulk, the sky, with the exception of a filmy haze overhanging the eastern end of the island, was clear. Now, as they emerged from the cabin, this haze had solidified and was coming—one of the black and vicious squalls of the West India seas.

"No man can tell what wind there is in them," remarked Boston, as he viewed it. "But it's pretty close to the water, and dropping rain. Hold on, there, Doc. Stay aboard. We couldn't pull ashore in the teeth of it." The doctor had made a spasmodic leap to the rail. "If the anchor chains were shackled on, we might drop one of the hooks and hold her, but it's two hours' work for a full crew."

"But we're likely to be blown away, aren't we?" asked the doctor.

"Not far. I don't think it'll last long. We'll make the boat fast astern and get out of the wet." They did so, and entered the cabin. Soon the squall, coming with a shock like a solid blow, struck the hulk broadside to and careened her. From the cabin door they watched the nearly horizontal rain as it swished across the deck, and listened to the screaming of the wind, which prevented all conversation. Silently they waited—one hour—two hours—then Boston said: "This is getting seri-

ous. It's no squall. If it wasn't so late in the season I'd call it a hurricane. I'm going on deck."

He climbed the companion-way stairs to the poop, and shut the scuttle behind him, for the rain was flooding the cabin; then looked around. The shore and horizon were hidden by a dense wall of gray, which seemed not a hundred feet away. From to windward this wall was detaching great waves or sheets of almost solid water, which bombarded the ship in successive blows, to be then lost in the gray whirl to leeward. Overhead was the same dismal hue, marked by hurrying masses of darker cloud, and below was a sea of froth, white and flat; for no waves could raise their heads in that wind. Drenched to the skin, he tried the wheel and found it free in its movements. In front of it was a substantial binnacle, and within a compass, which, though sluggish, as from a well-worn pivot, was practically in good condition. "Blowing us about nor'west by west," he muttered, as he looked at it, "straight up the coast. It's better than the beach in this weather, but may land us in Havana." He examined the boat. It was full of water, and tailing to windward, held by its painter. Making sure that this was fast, he went down.

"Doc," he said, as he squeezed the water from his limp cork helmet and flattened it on the table, "have you any objections to being rescued by some craft going into Havana?"

"I have—decided objections."

"So have I; but this wind is blowing us there—sideways. Now, such a blow as this, at this time of year, will last three days at least, and I've an idea that it'll haul gradually to the south toward the end of it. Where'll we be then? Either piled up on one of the Bahama cays or interviewed by the Spaniards. Now I've been thinking of a scheme on deck. We can't get back to camp for a while—that's settled. This iron hull is worth something, and if we can take her into an American port we can claim salvage. Key West is the nearest, but Fernandina is the surest. We've got a stump of a foremast and a rudder and a compass. If we can get some kind of sail up forward and bring her 'fore the wind, we can steer any course within thirty degrees of the wind line."

"But I can't steer. And how long will this voyage take? What will we eat?"

"Yes, you can steer; good enough. And, of course, it depends on food, and water, too. We'd better catch some of this that's going to waste."

In what had been the steward's storeroom they found a harness-cask with bones and a dry dust in the bottom. "It's salt meat, I suppose," said the doctor, "reduced to its elements." With the handles of their pistols they carefully hammered down the rusty hoops over the shrunken staves, which were well preserved by the brine they had once held, and taking it out on deck, cleaned it thoroughly under the scuppers—or drain holes—of the poop, and let it stand under the stream of water to swell and sweeten itself.

"If we find more casks we'll catch some more," said Boston; "but that will last us two weeks. Now we'll hunt for her stores. I've eaten salt horse twenty years old, but I can't vouch for what we may find here." They examined all the rooms adjacent to the cabin, but found nothing.

"Where's the lazarette in this kind of a ship?" asked Boston. "The cabin runs right aft to the stern. It must be below us." He found that the carpet was not tacked to the floor, and, raising the after end, discovered a hatch, or trap-door, which he lifted. Below, when their eyes were accustomed to the darkness, they saw

boxes and barrels—all covered with the same fine dust which filled the cabin.

"Don't go down there, yet, Boston," said the doctor. "It may be full of carbonic acid gas. She's been afire, you know. Wait." He tore a strip from some bedding in one of the rooms, and, lighting one end by means of a flint and steel which he carried, lowered the smouldering rag until it rested on the pile below. It did not go out.

"Safe enough, Boston," he remarked. "But you go down; you're younger."

Boston smiled and sprang down on the pile, from which he passed up a box. "Looks like tinned stuff, Doc. Open it, and I'll look over here."

The doctor smashed the box with his foot, and found, as the other had thought, that it contained cylindrical cans; but the labels were faded with age. Opening one with his jack-knife, he tasted the contents. It was a mixture of meat and a fluid, called by sailors "soup and bully," and as fresh and sweet as though canned the day before.

"We're all right, Boston," he called down the hatch. "Here's as good a dish as I've tasted for months. Ready cooked, too."

Boston soon appeared. "There's some beef or pork barrels over in the wing," he said, "and plenty of this canned stuff. I don't know what good the salt meat is. The barrels seem tight, but we won't need to broach one for a while. There's a bag of coffee—gone to dust, and some hard bread that isn't fit to eat; but this'll do." He picked up the open can.

"Boston," said the doctor, "if those barrels contain meat, we'll find it cooked—boiled in its own brine, like this."

"Isn't it strange," said Boston, as he tasted the contents of the can, "that this stuff should keep so long?"

"Not at all. It was cooked thoroughly by the heat, and then frozen. If your barrels haven't burst from the expansion of the brine under the heat or cold, you'll find the meat just as good."

"But rather salty, if I'm a judge of salt horse. Now, where's the sail-locker? We want a sail on that foremast. It must be forward."

In the forecastle they found sailor's chests and clothing in all stages of ruin, but none of the spare sails that ships carry. In the boatswain's locker, in one corner of the forecastle, however, they found some iron-strapped blocks in fairly good condition, which Boston noted.

Then they opened the main hatch, and discovered a mixed pile of boxes, some showing protruding necks of large bottles, or carboys, others nothing but the circular opening. Here and there in the tangled heap were sections of canvas sails—rolled and unrolled, but all yellow and worthless. They closed the hatch, and returned to the cabin.

"They stowed their spare canvas in the 'tween-deck on top of the cargo," said Boston; "and the carboys—"

"And the carboys burst from the heat and ruined the sails," broke in the doctor. "But another question is, what became of that acid?"

"If it's not in the 'tween-deck yet, it must be in the hold—leaked through the hatches."

"I hope it hasn't reached the iron in the hull, Boston, my boy. It takes a long time for cold acids to act on iron after the first oxidation, but in fifty years mixed nitric and sulphuric will do lots of work."

"No fear, Doc; it had done its work when you were in your cradle. What'll we do for canvas? We must get this craft before the wind. How'll the carpet do?" Boston sprang to the edge, and tried the fabric in his fingers. "It'll go," he said; "we'll double it. I'll hunt for a palm and needle and some twine." These articles he found in the mate's room. "The twine's no better than yarn," said he, "but we'll use four parts."

Together they doubled the carpet diagonally, and with long stitches joined the edges. Then Boston sewed into each corner a thimble—an iron ring—and they had a triangular sail of about twelve feet hoist. "It hasn't been exposed to the action of the air like the ropes in the locker forward," said Boston, as he arose and took off the palm; "and perhaps it'll last till she pays off. Then we can steer. You get the big pulley blocks from the locker, Doc, and I'll get the rope from the boat—it's lucky I thought to bring it; I expected to lift things out of the hold with it."

At the risk of his life Boston obtained the coil from the boat, while the doctor brought the blocks. Then, together, they rove off a tackle. With the handles of their pistols, they knocked bunk-boards to pieces and saved the nails; then Boston climbed the foremast, as a painter climbs a steeple—by nailing successive billets of wood above his head for steps. Next he hauled up and secured the tackle to the forward side of the mast, with which they pulled up the upper corner of their sail,

after lashing the lower corners to the windlass and fife-rail.

It stood the pressure, and the hulk paid slowly off and gathered headway. Boston took the wheel and steadied her at north-west by west—dead before the wind, while the doctor, at his request, brought the open can of soup and lubricated the wheel-screw with the only substitute for oil at their command; for the screw worked hard with the rust of fifty years.

Their improvised sail, pressed steadily on but one side, had held together, but now, with the first flap as the gale caught it from another direction, appeared a rent; with the next flap the rag went to pieces.

"Let her go," sang out Boston, gleefully; "we can steer now. Come here, Doc, and learn to steer."

The doctor came; and when he left that wheel, three days later, he had learned. For the wind had blown a continuous gale the whole of this time, which, with the ugly sea raised as the ship left the lee of the land, necessitated the presence of both men at the helm. Only occasionally was there a lull during which one of them could rush below and return with a can of the soup. During one of these lulls, Boston had examined the boat, towing half out of water, and concluding that a short painter was best with a waterlogged boat, had reinforced it with a few turns of his rope from forward. In the three days they had sighted no craft except such as their own—helpless, hove-to, or scudding.

Boston had judged rightly in regard to the wind. It had hauled slowly to the southward, allowing him to make the course he wished—through the Bahama and up the Florida Channel with the wind over the stern. During the day he could guide himself by landmarks, but at night, with a darkened binnacle, he could only steer blindly on with the wind on his back. The storm centre, at first to the south of Cuba, had made a wide circle, concentric with the curving course of the ship, and when the latter had reached the upper end of the Florida Channel, had spurted ahead and whirled out to sea across her bows. It was then that the undiminished gale, blowing nearly west, had caused Boston, in despair, to throw the wheel down and bring the ship into the trough of the sea—to drift. The two wet, exhausted, hollow-eyed men slept the sleep that none but sailors and soldiers know; and when they awakened, twelve hours later, stiff and sore, it was to look out on a calm, starlit evening, with an eastern moon silver-

surface of the long, north-bound rollers, and showing in sharp relief a dark horizon, on which there was no sign of land or sail.

They satisfied their hunger; then Boston, with a rusty iron pot from the galley, to which he fastened the end of his rope, dipped up some of the water from over the side. It was warm to the touch, and, aware that they were in the Gulf Stream, they crawled under the musty bedding in the cabin berths and slept through the night. In the morning there was no promise of the easterly wind that Boston hoped would come to blow them to port, and they secured their boat—reeving off davit tackles, and with the plug out, pulling it up, one end at a time, while the water drained out through the hole in the bottom.

"Now, Boston," said the doctor, "here we are, as you say, on the outer edge of the Gulf Stream, drifting out into the broad Atlantic at the rate of four miles an hour. We've got to make the best of it until something comes along; so you hunt through that storeroom and see what else there is to eat, and I'll examine the cargo. I want to know where that acid went."

They opened all the hatches, and while Boston descended to the lazarette, the doctor, with his trousers rolled up, climbed down the notched steps in a stanchion. In a short time he came up with a yellow substance in his hand, which he washed thoroughly with fresh water in Boston's improvised draw-bucket, and placed in the sun to dry. Then he returned to the 'tween-deck. After a while, Boston, rummaging the lazarette, heard him calling through the bulkhead, and joined him.

"Look here, Boston," said the doctor; "I've cleared away the muck over this hatch. It's caulked, as you sailormen call it. Help me get it up."

They dug the compacted oakum from the seams with their knives, and by iron rings in each corner, now eaten with rust to the thinness of wire, they lifted the hatch. Below was a filthy-looking layer of whitish substance, protruding from which were charred, half-burned staves. First they repeated the experiment with the smouldering rag, and finding that it burned, as before, they descended. The whitish substance was hard enough to bear their weight, and they looked around. Overhead, hung to the under side of the deck and extending the length of the hold, were wooden tanks, charred, and in some places burned through.

"She must have been built for a passenger or troop ship," said Boston. "Those tanks would water a regiment."

"Boston," answered the doctor, irrelevantly, "will you climb up and bring down an oar from the boat? Carry it down—don't throw it, my boy." Boston obliged him, and the doctor, picking his way forward, then aft, struck each tank with the oar. "Empty—all of them," he said.

He dug out with his knife a piece of the whitish substance under foot, and examined it closely in the light of the hatch.

"Boston," he said, impressively, "this ship was loaded with lime, tallow, and acids—acids above, lime and tallow down here. This stuff is neither; it is lime soap. And, moreover, it has not been touched by acids." The doctor's ruddy face was ashen.

"Well?" asked Boston.

"Lime soap is formed by the causticizing action of lime on tallow in the presence of water and heat. It is easy to understand this fire. One of those tanks leaked and dribbled down on the cargo, attacking the lime, which was stowed underneath, as all these staves we see on top are from tallow-kids. The heat generated by the slacking lime set fire to the barrels in contact, which in turn set fire to others, and they burned until the air was exhausted, and then went out. See, they are but partly consumed. There was intense heat in this hold, and expansion of the water in all the tanks. Are tanks at sea filled to the top?"

"Chock full, and a cap screwed down on the upper end of the pipes."

"As I thought. The expanding water burst every tank in the hold, and the cargo was deluged with water, which attacked every lime barrel in the bottom layer, at least. Result—the bursting of those barrels from the ebullition of slacking lime, the melting of the tallow—which could not burn long in the closed-up space—and the mixing of it in the interstices of the lime barrels with water and lime—a boiling hot mess. What happens under such conditions?"

"Give it up," said Boston, laconically.

"Lime soap is formed, which rises, and the water beneath is in time all taken up by the lime."

"But what of it?" interrupted the other.

"Wait. I see that this hold and the 'tween-deck are lined with wood. Is that customary in iron ships?"

"Not now. It used to be a notion that



"FOURD ON ESD IN MID-AIR, WITH DECK AND SPINNOSS STILL INTACT, A BOWLESS, BOTTOMLESS REMNANT OF THE CRUISER."

an iron skin damaged the cargo; so the first iron ships were ceiled with wood."

"Are there any drains in the 'tween-deck to let water out, in case it gets into that deck from above—a sea, for instance?"

"Yes, always; three or four scupper-holes each side amidships. They lead the water into the bilges, where the pumps can reach it."

"I found up there," continued the doctor, "a large piece of wood, badly charred by acid for half its length, charred to a lesser degree for the rest. It was oval in cross section, and the largest end was charred most."

"Scupper plug. I suppose they plugged the 'tween-deck scuppers to keep any water they might ship out of the bilges and away from the lime."

"Yes, and those plugs remained in place for days, if not weeks or months, after the carboys burst, as indicated by the greater charring of the larger end of the plug. I burrowed under the debris, and found the hole which that plug fitted. It was worked loose, or knocked out of the hole by some internal movement of the broken carboys, perhaps. At any rate, it came out, after remaining in place long enough for the acids to become thoroughly mixed and for the hull to cool down. She was in the ice, remember. Boston, the mixed acid went down that hole, or others like it. Where is it now?"

"I suppose," said Boston, thoughtfully, "that it soaked up into the hold, through the skin."

"Exactly. The skin is caulked with oakum, is it not?" Boston nodded.

"That oakum would contract with the charring action, as did the oakum in the hatch, and every drop of that acid—ten thousand gallons, as I have figured—has filtered up into the hold, with the exception of what remained between the frames under the skin. Have you ever studied chemistry?"

"Slightly."

"Then you can follow me. When tallow is saponified there is formed, from the palmitin, stearin, and olein contained, with the causticizing agent—in this case, lime—a soap. But there are two ends to every equation, and at the bottom of this immense soap vat, held in solution by the water, which would afterwards be taken up by the surplus lime, was the other end of this equation; and as the yield from tallow of this other product is about thirty per cent., and as we start with eight

thousand fifty-pound kids—four hundred thousand pounds—all of which has disappeared, we can be sure that, sticking to the skin and sides of the barrels down here, is—or was once—one hundred and twenty thousand pounds, or sixty tons, of the other end of the equation—glycerine!"

"Do you mean, Doc," asked Boston, with a startled look, "that—"

"I mean," said the doctor, emphatically, "that the first thing the acids—mixed in the 'tween-deck to the right proportions, mind you—would attack, on oozing through the skin, would be this glycerine; and the certain product of this union under intense cold—this hull was frozen in the ice, remember—would be nitro-glycerine; and, as the yield of the explosive mixture is two hundred and twenty per cent. of the glycerine, we can be morally sure that in the bottom of this hold, held firmly in a hard matrix of sulphate or nitrate of calcium—which would be formed next when the acids met the hydrates and carbonates of lime—is over one hundred and thirty tons of nitro-glycerine, all the more explosive from not being washed of free acids. Come up on deck. I'll show you something else."

Limp and nerveless, Boston followed the doctor. This question was beyond his seamanship.

The doctor brought the yellow substance—now well dried. "I found plenty of this in the 'tween-deck," he said; "and I should judge they used it to pack between the carboy boxes. It was once cotton-batting. It is now, since I have washed it, a very good sample of gun-cotton. Get me a hammer—crowbar—something hard."

Boston brought a marline-spike from the locker, and the doctor, tearing off a small piece of the substance and placing it on the iron barrel of a gipsy-winch, gave it a hard blow with the marline-spike, which was nearly torn from his hand by the explosion that followed.

"We have in the 'tween-deck," said the doctor, as he turned, "about twice as many pounds of this stuff as they used to pack the carboys with; and, like the nitro-glycerine, it is the more easily exploded from the impurities and free acids. I washed this for safe handling. Boston, we are adrift on a floating bomb that would pulverize the Rock of Gibraltar!"

"But, Doctor," asked Boston, as he leaned against the rail for support, "wouldn't there be evolution of heat from the action of the acids on the lime—"

enough to explode the nitro-glycerine just formed?"

"The best proof that it did not explode is the fact that this hull still floats. The action was too slow, and it was very cold down there. But I can't yet account for the acids left in the bilges. What have they been doing all these fifty years?"

Boston found a sounding-rod in the locker, which he scraped bright with his knife; then, unlaying a strand of the rope for a line, sounded the pump-well. The rod came up dry, but with a slight discoloration on the lower end, which Boston showed to the doctor.

"The acids have expended themselves on the iron frames and plates. How thick are they?"

"Plates, about five-eighths of an inch; frames, like railroad iron."

"This hull is a shell! We won't get much salvage. Get up some kind of distress signal, Boston." Somehow the doctor was now the master spirit.

A flag was nailed to the mast, union down, to be blown to pieces with the first breeze; then another, and another, until the flag locker was exhausted. Then they hung out, piece after piece, all they could spare of the rotten bedding, until that too was exhausted. Then they found, in a locker of their boat, a flag of Free Cuba, which they decided not to waste, but to hang out only when a sail appeared.

But no sail appeared, and the craft, buffeted by gales and seas, drifted eastward, while the days became weeks, and the weeks became months. Twice she entered the Sargasso Sea—the graveyard of derelicts—to be blown out by friendly gales and resume her travels. Occasional rains replenished the stock of fresh water, but the food they found at first, with the exception of some cans of fruit, was all that came to light. The salt meat was leathery, and crumbled to a salty dust on exposure to the air. After a while their stomachs revolted at the diet of cold soup, and they ate only when hunger compelled them.

At first they had stood watch-and-watch, but the lonely horror of the long night vigils in the constant apprehension of instant death had affected them alike, and they gave it up, sleeping and watching together. They had taken care of their boat and provisioned it, ready to lower and pull into the track of any craft that might approach. But it was four months from the beginning of this strange voyage when the two men, gaunt and hungry

—with ruined digestions and shattered nerves—saw, with joy which may be imagined, the first land and the first sail that gladdened their eyes after the gale in the Florida Channel.

A fierce gale from the southwest had been driving them, broadside on, in the trough of the sea, for the whole of the preceding day and night; and the land they now saw appeared to them a dark, ragged line of blue, early in the morning. Boston could only surmise that it was the coast of Portugal or Spain. The sail which lay between them and the land, about three miles to leeward, proved to be the try-sail of a white craft, hove-to, with bows nearly toward them.

Boston climbed the foremast with their only flag and secured it; then, from the high poop-deck, they watched the other craft, plunging and wallowing in the immense Atlantic combers, often raising her forefoot into plain view, again descending with a dive that hid the whole forward half of the craft in a white cloud of spume.

"If she was a steamer I'd call her a cruiser," said Boston; "one of Uncle Sam's white ones, with a storm sail on her military mainmast. She has a ram bow, and—yes, sponsons and guns. That's what she is, with her funnels and bridge carried away."

"Isn't she right in our track, Boston?" asked the doctor, excitedly. "Hadn't she better get out of our way?"

"She's got steam up—a full head: see the escape-jet. She isn't helpless. If she don't launch a boat, we'll take to ours and board her."

The distance lessened rapidly—the cruiser plunging up and down in the same spot, the derelict heaving to leeward in great, swinging leaps, as the successive seas caught her, each one leaving her half a length further on. Soon they could make out the figures of men.

"Take us off," screamed the doctor, waving his arms, "and get out of our way!"

"We'll clear her," said Boston; "see, she's started her engine."

As they drifted down on the weather side of the cruiser they shouted repeatedly words of supplication and warning. They were answered by a solid shot from a secondary gun, which flew over their heads. At the same time, the ensign of Spain was run up to the masthead.

"They're Spanish, Boston. They're firing on us. Into that boat with you! If

a shot hits our cargo, we won't know what struck us."

They sprang into the boat, which luckily hung on the lee side, and cleared the falls—fastened and coiled in the bow and stern. Often during their long voyage they had rehearsed the launching of the boat in a seaway—an operation requiring quick and concerted action.

"Ready, Doc?" sang out Boston. "One, two, three—let go!" The falls overhauled with a whir, and the falling boat, striking an uprising sea with a smack, sank with it. When it raised they unhooked the tackle blocks, and pushed off with the oars just as a second shot hummed over their heads.

"Pull, Boston; pull hard—straight to windward!" cried the doctor.

The tight whaleboat shipped no water, and though they were pulling in the teeth of a furious gale, the hulk was drifting away from them, and in a short time they were separated from their late home by a full quarter-mile of angry sea. The cruiser had forged ahead in plain view, and, as they looked, took in the try-sail.

"She's going to wear," said Boston. "See, she's paying off."

"I don't know what 'wearing' means, Boston," panted the doctor, "but I know the Spanish nature. She's going to ram that hundred and thirty tons of nitro. Don't stop. Pull away. Hold on, there; hold on, you fools!" he shouted. "That's a torpedo; keep away from her!"

Forgetting his own injunction to pull away, the doctor stood up, waving his oar frantically, and Boston assisted. But if their shouts and gestures were understood aboard the cruiser, they were ignored. She slowly turned in a wide curve and headed straight for the "Neptune," which had drifted to leeward of her.

What was in the minds of the officers on that cruiser's deck will never be known. Cruisers of all nations hold roving commissions in regard to derelicts, and it is fitting and proper for one of them to gently prod a "vagrant of the sea" with the steel prow and send her below to trouble no more. But it may be that the sight of the Cuban flag, floating defiantly in the gale, had something to do with the speed at which the cruiser approached.

When but half a length separated the two crafts, a heavy sea lifted the bow of the cruiser high in air; then it sank, and the sharp steel ram came down like a butcher's cleaver on the side of the derelict.

A great semi-circular wall of red shut out the gray of the sea and sky to leeward, and for an instant the horrified men in the boat saw—as people see by a lightning flash—dark lines radiating from the centre of this red wall, and near this centre, poised on end in mid-air, with deck and sponsons still intact, a bowless, bottomless remnant of the cruiser. Then the spectacle went out in the darkness of unconsciousness; for a report, as of concentrated thunder, struck them down. A great wave left the hollow vortex in the sea, which threw the boat on end, and with the inward rush of surrounding water arose a mighty gray cone, which subsided to a hollow, while another wave followed the first. Again and again this gray pillar rose and fell, each subsidence marked by the sending forth of a wave. And long before these concentric waves had lost themselves in the battle with the storm-driven combers from the ocean, the half-filled boat, with her unconscious passengers, had drifted over the spot where lay the shattered remnant, which, with the splintered fragments of wood and iron strewn on the surface and bottom of the sea for a mile around, and the lessening cloud of dust in the air, was all that was left of the derelict "Neptune" and one of the finest cruisers in the Spanish navy.

A few days later, two exhausted, half-starved men pulled a whaleboat up to the steps of the wharf at Cadiz, where they told some lies and sold their boat. Six months later, these two men, sitting at a camp-fire of the Cuban army, read from a discolored newspaper, brought ashore with the last supplies, the following:

"By cable to the 'Herald.'"

"CADIZ, March 13, 1895.—Anxiety for the safety of the 'Reina Regente' has grown rapidly to-day, and this evening it is feared, generally, that she went down with her four hundred and twenty souls in the storm which swept the southern coast on Sunday night and Monday morning. Despatches from Gibraltar say that pieces of a boat and several semaphore flags belonging to the cruiser came ashore at Ceuta and Tarifa this afternoon."